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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,264	11/23/2001	Hiroshi Sugiura	216379US2	2415

22850 7590 11/05/2003

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ALEXANDRIA, VA 22314

EXAMINER

MARTIN, ANGELA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 11/05/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/990,264

Applicant(s)
Sugiura et al.

Examiner
Angela J. Martin

Art Unit
1745



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 29, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above, claim(s) 14-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, and 12 is/are rejected.
- 7) ☒ Claim(s) 10 and 13 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 7 6) ☐ Other:

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DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of claims 1-13 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application "would not place a *serious* burden on the Examiner". This is not found persuasive because the inventions of Group I, II, III, and IV are distinct and have acquired a separate status in the art..

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35

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U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-9, 11, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Freeman et al., U.S. Pat. No. 6,519,539.

Rejection of claims 1-7 drawn to a fuel cell output characteristic estimating apparatus and claims 8, 9, 11, and 12 drawn to a fuel cell system.

Freeman et al., teach fuel cell output characteristic estimating apparatus for estimating an output characteristic of a fuel cell, comprising a current-voltage detector and a controller that estimates the output characteristic of the fuel cell on the basis of the detected output current and the detected voltage between the terminals, detected by the current-voltage detector, and a basic output characteristic of the fuel cell (col. 5, lines 57-67 and col. 6, lines 1-2). Additionally, it teaches the controller derives the basic output characteristic from a temperature of the fuel cell (col. 6, lines 46-53); wherein the controller estimates an internal resistance of the fuel cell on the basis of the detected output current, the detected voltage, and the basic output characteristic, and estimates the output characteristic of the fuel cell on the basis of the internal resistance (col. 6, lines 1-6 and lines 46-54). Applicant claims a fuel cell system having a fuel cell (col. 5, lines 33-37), the system further comprising a fuel cell output characteristic estimating apparatus, including a current-voltage detector and a controller that estimates the output characteristic of the fuel cell based on the detected output current and the detected voltage detected by the current-voltage detector (col. 5, lines 24-39), and a basic output characteristic of the fuel cell (col. 6, lines 46-54),

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sets a target output of the fuel cell using the output characteristic of the fuel cell estimated by the controller, and adjusts an output of the fuel cell such that the set target output is generated by the fuel cell (col. 6, lines 34-39). It also teaches a fuel cell system further comprising a power supply that supplies electric power to and receives electric power from the fuel cell system (col. 5, lines 31-39), wherein the controller sets the target output of the fuel cell on the basis of an output required by the fuel cell system and when the set target output of the fuel cell is in excess of or short of the required output of the fuel cell system, the controller changes supply of the electric power to or from the power supply (col. 5, lines 31-51); wherein the controller changes the voltage between the terminals of the fuel cell into a voltage corresponding to the set target output (col. 5, lines 21-30).

Thus, the claims are anticipated.

Allowable Subject Matter

4. Claims 10 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The Applicant claims a fuel cell system according to claim 9, wherein the controller includes a transformer connected to terminals of the power supply and transforms the voltage between the terminals of the power supply to be applied to output terminals of the fuel cell.

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Applicant also claims a fuel cell system according to claim 10, wherein the controller changes the voltage between the terminals of the fuel cell into a voltage corresponding to the set target output.

The prior art of record does not disclose a fuel cell system as described above, wherein the controller includes a transformer connected to terminals of the power supply.

Examiner Correspondence

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Angela J. Martin whose telephone number is (703) 305-0586. The Examiner can normally be reached on Monday - Friday from 8:00am to 4:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Patrick Ryan, can be reached at (703) 308-2383.

In order to transmit a fax, the number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

AJM

A handwritten signature in black ink, appearing to read "Angela J. Martin". The signature is written in a cursive, flowing style with a horizontal line at the end.